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Product no AS16 3955

Anti-PIF4 | Phytochrome interacting factor 4 (goat antibody)

Product information

Immunogen	KLH-conjugated peptide derived from *Arabidopsis thaliana* PIF4, UniProt:Q8W2F3, TAIR:AT2G43010
Host	Goat
Clonality	Polyclonal
Purity	Immunogen affinity purified serum in PBS pH 7.4.
Format	Lyophilized
Quantity	50 µg
Reconstitution	For reconstitution add 50 µl of sterile water
Storage	Store lyophilized/reconstituted at -20°C; once reconstituted make aliquots to avoid repeated freeze-thaw cycles,Please remember to spin the tubes briefly prior to opening them to avoid any losses that might occur from material adhering to the cap or sides of the tube.
Additional information	PIF proteins are not that stable, therefore special precautions should be taken during extraction and whole procedure should be performed in as little light as possible (light green light). Extraction of PIF proteins is described in Shen et al. (2007).

Application information

Recommended dilution	1 : 1000 (WB)
Expected | apparent MW	48.3 | 60 kDa
Confirmed reactivity	*Arabidopsis thaliana*
Predicted reactivity	*Brassica napus, Brassica rapa, Camelina sativa, Eutrema salsugineum* Species of your interest not listed? Contact us
Not reactive in	*Solanum lycopersicum, Vitis vinifera*
Additional information	Material used need to be up to 8 days old as detection in older rosette leaf may fail
Selected references	Bian et al. (2024). The BBX7/8 CCA1/LHY transcription factor cascade promotes shade avoidance by activating PIF4. New Phytol . 2024 Nov 8. doi: 10.1111/nph.20256. Fang et al. (2022) TANDEM ZINC-FINGER/PLUS3 regulates phytochrome B abundance and signaling to fine-tune hypocotyl growth. Plant Cell. 2022;34(11):4213-4231. doi:10.1093/plcell/koac236 Bajracharya, Xi, Grace, et al. (2022) PHYTOCHROME-INTERACTING FACTOR 4/HEMERA-mediated thermosensory growth requires the Mediator subunit MED14. Plant Physiol. 2022;190(4):2706-2721. doi:10.1093/plphys/kiac412 Agrawal et al. (2022) MEDIATOR SUBUNIT17 integrates jasmonate and auxin signaling pathways to regulate thermomorphogenesis. Plant Physiol. 2022 Aug 1;189(4):2259-2280. doi: 10.1093/plphys/kiac220. PMID: 35567489. Lee at al. (2021) Spatial regulation of thermomorphogenesis by HY5 and PIF4 in Arabidopsis. Nat Commun. 2021 Jun 16;12(1):3656. doi: 10.1038/s41467-021-24018-7. PMID: 34135347; PMCID: PMC8209091. Lee, Paik & Huq. (2020). SPAs promote thermomorphogenesis by regulating the phyB-PIF4 module in Arabidopsis. Development. 2020 Oct 8;147(19):dev189233. doi: 10.1242/dev.189233. PMID: 32994167; PMCID: PMC7561471.

Application example

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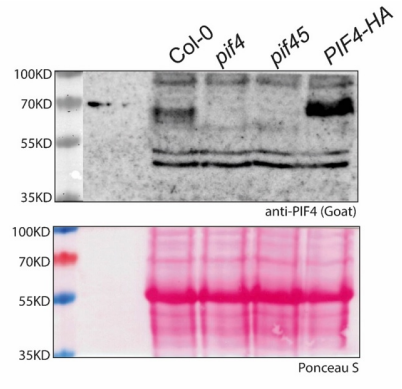

30 ul of total protein from *Arabidopsis thaliana* grown in 12 hour light/ 12 hour dark growth conditions and 6-day-old seedling samples taken at the end of the day (ZT12) were extracted with 100 mM MOPS, pH 7.6, 100 mM NaCl, 10% glycerol, 40 mM 2-mercaptoethanol, 5% SDS, 1X protease inhibitor cocktail from Roche, 2 mM PMSF. 80 µl buffer were added to about 100 µl grinded powder, then immediately heated at 70ºC for 10 minutes and separated on 8 % Bis-Tris SDS-PAGE and blotted 1h to PVDF using semi-dry or tank transfer. Blots were blocked with 5 % non-fat milk in TBST for 1h at room temperature (RT) with agitation. Blot was incubated in the primary antibody at a dilution of 1: 1 000 for over night at 4ªC with agitation in TBS-T. The antibody solution was decanted and the blot was rinsed briefly twice, then washed once for 15 min and 3 times for 5 min in TBS-T at RT with agitation. Blot was incubated in secondary antibody (anti-goat IgG horse radish peroxidase conjugated) diluted to 1:10 000 in for 1h at RT with agitation. The blot was washed as above and developed for 5 minutes with chemiluminescent detection reagent. Exposure time was 1 minute.

Courtesy of Dr. Bo Zhang, Umeå Plant Science Centre, Sweden